THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LARRY E. REED, RONALD E. BROWN, TIMOTHY P. MURTHA, TIMOTHY P. HARPER, JAMES P. DEGRAFFENRIED, MARK D. SCHARRE and GIL J. GREENWOOD

Appeal No. 96-1770
Application 08/296,307[1]

ON BRIEF

Before WINTERS, OWENS, and WALTZ, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the

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[1] Application for patent filed August 25, 1994.

examiner's final rejection of claims 1 through 14, which are the only claims in this application.

According to appellants, the invention is directed to a method of controlling the decomposition temperature of an organosilicon compound by adding an organotin compound in order to improve the laydown of silicon upon metal surfaces (Brief, page 2). Illustrative claim 1 is reproduced below:

1. A method of promoting the decomposition of an organosilicon compound, said organosilicon compound having a decomposition temperature required to achieve a given percentage decomposition, in a process for depositing silicon upon a metal surface, said method comprising the steps of:

admixing with said organosilicon compound an organotin compound in an amount effective to lower said decomposition temperature of said organosilicon compound to a reduced decomposition temperature required to achieve said given percentage decomposition to form an admixture; and

contacting said admixture with said metal surface at said reduced decomposition temperature to thereby deposit silicon thereon.

The examiner has relied upon the following reference as evidence of obviousness:

Porter et al. (Porter) 4,692,234 Sep. 8, 1987

Claims 1 through 14 stand rejected under 35 U.S.C. § 103 as unpatentable over Porter (Answer, page 3, citing the final rejection dated Mar. 21, 1995, Paper No. 5). We reverse this

rejection for reasons which follow.

OPINION

The examiner finds that Porter discloses the application of organotin compounds with organosilicon compounds to metal substrates in order to prevent coke deposition on the metal surfaces of thermal cracking reactors (Final Rejection, page 3, citing Porter, column 2, lines 35-36; 68-69; column 3, lines 38-44; 38[sic]-65; column 5, line 58-column 6, line 8). The examiner states that Porter teaches the improvement obtained by adding organotin compounds to the organosilicon (Id., citing Porter, Table 1, column 9, lines 40-45).

The examiner concludes that, since applicants do not perform any different process steps than the reference, the result observed "must be inherent in the Porter process." (Id.). Although the examiner does not mention inherency in the Answer, the examiner arrives at the same conclusion:

> Porter as well as the Appellant adds the two compounds and apply the mixture to cracking equipment surfaces, to prevent coke deposition. . . . [R]egardless of the number of given variables the appellants define, they employ the same steps as they did in the Porter reference. (Answer, pages 3-4).

Apparently the examiner is basing this conclusion on the premise that, since the steps in the claims and the prior art

are the same, the results must inherently be the same. In re Sussman, 141 F.2d 267, 269-70, 60 USPQ 538, 540-41 (CCPA 1944); Ex parte Marhold, 231 USPQ 904, 905 (Bd. Pat. App. & Int. 1986) (Since the steps are the same, the results must inherently be the same unless they are due to conditions not recited in the claims).

Appellants argue that Porter does not teach the method steps for controlling the decomposition temperature and percentage decomposition of organosilicon (Brief, page 6). Appellants further argue that the examiner has ignored the temperature and decomposition limitations of the claims (Brief, page 12). The initial burden of establishing unpatentability rests with the examiner. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. [Citations omitted]." In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999). In fact, the examiner admits that Porter does not disclose that the decomposition temperature of the organosilicon is reduced by the addition of

the organotin compound (Final Rejection, page 3). The examiner merely reiterates that the steps of Porter and the claims on appeal are the same (Answer, page 4).

In our view, the examiner has not established that the process steps of the claims on appeal are the same as the steps disclosed by Porter. The method of appealed claim 1 requires that the admixture of organosilicon and organotin is contacted with the metal surface “at said reduced decomposition temperature . . ." to thereby deposit silicon thereon. The examiner has failed to point to any disclosure or teaching in Porter of contacting the admixture of compounds at a reduced decomposition temperature. Although not discussed by the examiner, Porter does disclose that the antifoulant admixture is applied to the metal surface and then treated by heating to 700EC. in air for one minute “to decompose the antifoulant to its oxide . . . ” (column 8, lines 30-36). However, Porter teaches the same decomposition temperature for the organosilicon compound per se as used for the organosilicon and organotin admixture (see Example 1 in column 8, solutions C and D). Even if there was evidence of record as to the decomposition temperature of the organosilicon compounds (specifically tetraethylorthosilicate, see solution C), this disclosure by Porter of the same treating temperature for organosilicon compounds and the

organosilicon-organotin admixture would not have suggested the "reduced decomposition" temperature limitation required for the organosilicon-organotin admixture in the method of the claims on appeal. Therefore the examiner has failed to establish that Porter provides any disclosure or teaching of employing a reduced decomposition temperature for the organosilicon-organotin admixture as required by claim 1 on appeal.

In addition to the limitation regarding a reduced decomposition temperature found in claim 1 on appeal, the method of claim 8 on appeal requires a step of "defining said given percentage decomposition . . . ." The examiner has not presented any evidence or pointed to any disclosure or teaching in Porter that would have shown or suggested this limitation.

For the foregoing reasons, we determine that the examiner has failed to establish a prima facie case of obviousness. Accordingly, the examiner's rejection of claims 1-14 under § 103 as unpatentable over Porter cannot be sustained.

The decision of the examiner is reversed.

REVERSED

SHERMAN D. WINTERS Administrative Patent Judge	)	
TERRY J. OWENS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
THOMAS A. WALTZ Administrative Patent Judge	)	

TAW:svt

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